

Questions regarding the interleaving timing and control requirements: (From conversations with Ned Arnold)

- How far in advance do the BPMs need to have their triggers enabled? LEUTL tunnel BPMs? LEUTL ICTs?
- How will we indicate (i.e. provide as a readback) which beam bucket is being triggered?
- How will the controllaws react?
- How far in advance will the fast-ramping correctors need to be triggered to ramp? (Or, can we synchronize the start of the ramp time with bunch 0 and go from there?)
- How will we gate out the BPMs and other diagnostics that will not see any beam when the PCgun is filling the PAR? Have a PV that indicates the dipoles are ramping, or ...?

A start-of-ramp jitter time implies a faster ramp rate for an AFG-based solution; the ramp itself should probably consist of a series of step functions which take the corrector from one setpoint to another.

the IOC can provide a vector of bunch positions based on specific-bunch measurements; controllaw could read these out and correct en masse. Probably this would need a 6-second acquisition time for an entire vector, given the way the booster bypass BPMs measure beam positions. We really need the bunch compressor-type BPM electronics everywhere.